Merkel & Associates, Inc.
5434 Ruffin Road, San Diego, CA 92123
Tel: 858/560-5465 • Fax: 858/560-7779
e-mail: associates@merkelinc.com

July 27, 2007
Revised January 23, 2008
M&A #03-055-05

Mr. Christopher Kirkorowicz
c/o Mr. James Boeker
Pasco Engineering, Inc.
535 North Highway 101, Suite A
Solana Beach, CA 92075

Re: Biological Impact Analysis Letter Report for the Kirkorowicz Property, Located in the County of San Diego, California (APN 126-340-27) (County of San Diego Case Number TPM20986)

Dear Mr. Kirkorowicz:

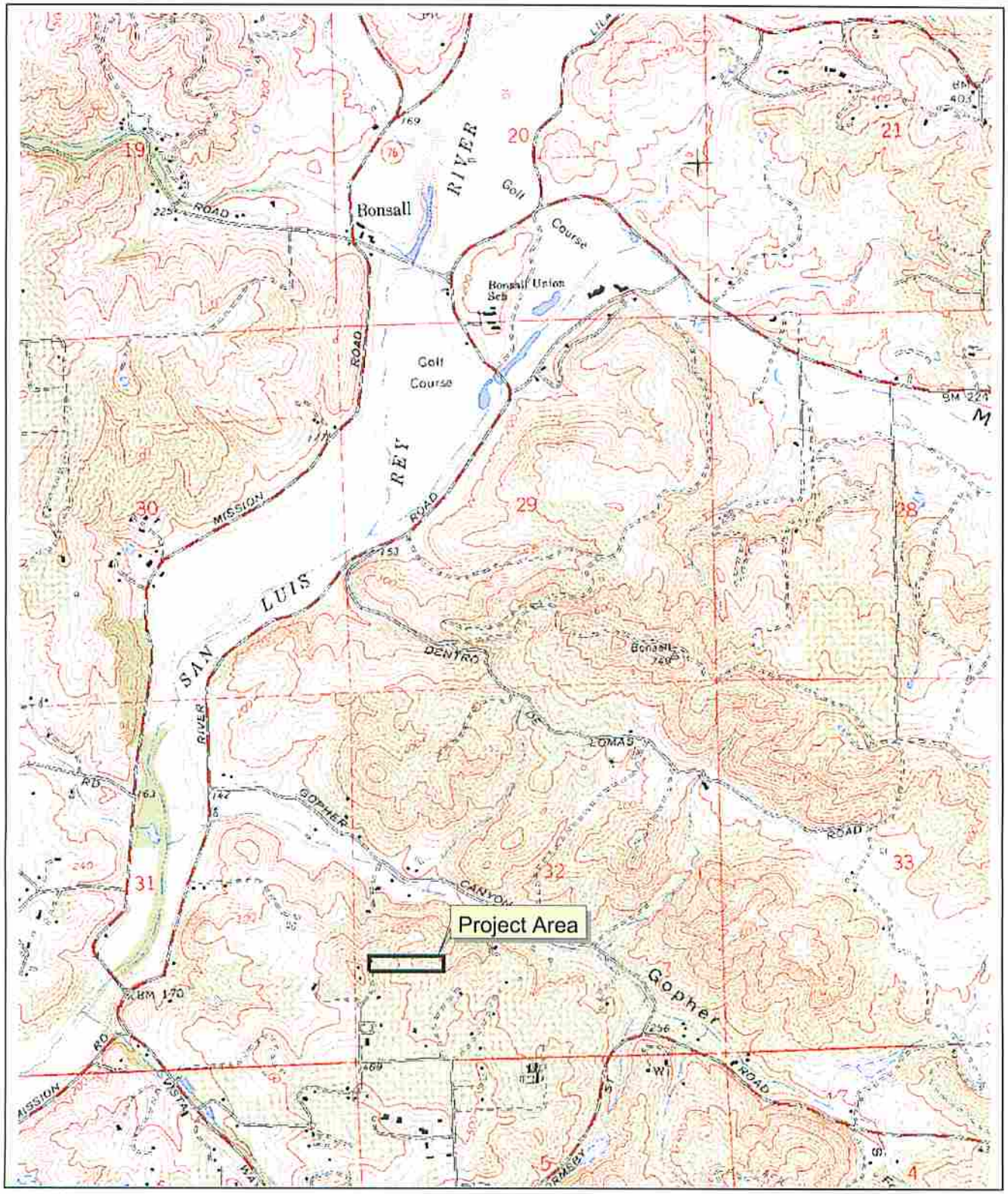
INTRODUCTION

Merkel & Associates, Inc. (M&A) has prepared this biological resource letter report for your proposed single-family residence project. The purpose of this report is to 1) determine the extent of biological resources present within the study area; 2) identify potential impacts to biological resources that could result from implementation of the proposed project; and 3) recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with federal, state, and local rules and regulations including the California Environmental Quality Act (CEQA) and the County of San Diego (County) Resource Protection Ordinance (RPO). Since the existing biological conditions portion of this report was written prior to issuance of the current County Report Format and Content Requirements, for consistency purposes, report revisions in response to the County comments pertaining to the existing biological conditions have been completed in the same report format as previously submitted, in accordance with the County Biological Survey Guidelines and Biological Resource Mapping Requirements, dated June 2002; however, efforts have been made to write the new project impact analysis portion of this report in accordance with the updated County Report Format and Content Requirements.

PROJECT SITE LOCATION

The Kirkorowicz Property (Assessors Parcel Number 126-340-27) is located off of Fairview Drive in the County of San Diego. The site is on the southern edge of Gopher Canyon, south of Gopher Canyon Road, and east of the San Luis Rey River. Access to the study area is via Fairview Drive. The site lies within the southwest corner of Section 32 of Township 10 South, Range 3 West of the San Bernardino Base and Meridian; USGS 7.5' Bonsall, California Quadrangle (Figure 1).

M&A #03-055-04



1" = 2000'

Project Vicinity Map

Kirkorowicz Property

Source: USGS 7.5' Bonsall, California Quadrangle

Figure 1

Merkel & Associates, Inc.

PHYSICAL CHARACTERISTICS

The Kirkorowicz Property consists of a slope gradient across the site, generally from west to east, particularly in the northeastern portion of the site where steep slopes are mapped (e.g., 30 to 65 percent slopes). A drainage runs through the north-central portion of the property and is part of a tributary to Little Gopher Canyon Creek. The maximum elevation is approximately 465 feet above mean sea level (MSL), while the low elevation is approximately 300 feet above msl. The underlying surficial geology is mapped as Mesozoic basic intrusive rocks and Jura-Trias metavolcanic rocks (Rogers 1965). The soil is mapped primarily as Las Posas stony fine sandy loam and fine sandy loam. The Las Posas soil series consists of well-drained, moderately deep stony fine sandy loams that have clay subsoil. A small portion of the property, to the south, is mapped as Wyman loam, which is also a well-drained soil. Both of the soil series were formed in material weathered from basic igneous rocks (Bowman et al. 1973). Currently, the site is vacant. Surrounding land uses include a nursery to the north, open space to the northeast and east, and residential development to the west and south.

PROPOSED PROJECT DESCRIPTION

The project is a Tentative Parcel Map (TPM) proposing subdivision of the existing 7.21-acre property into 2 separate legal parcels for future, single-family residential developments on each parcel. A private driveway is proposed to provide access to both parcels, and a 100-foot fuel modification zone will be required around each proposed residence. Utilities including water, gas, and electric are to be provided to each building site from Fairview Drive. Existing agricultural activity may continue within the proposed residential developments.

Currently, there are no existing structures on the site. Parcel 1 is encumbered by a 12-foot and 40-foot road and utility easement for Fairview Drive, and a one-foot access restriction easement to Fairview Drive is proposed. Parcels 1 and 2 are encumbered by a 52-foot road and utility easement for the private drive. An unplotable easement in favor of Vista Irrigation District exists on the entire property.

Access improvements will be limited to the intersection of Fairview Drive and the private driveway.

An on-site biological open space easement and a 100-foot limited building zone easement are proposed for mitigation of project impacts.

METHODS AND SURVEY LIMITATIONS

LITERATURE REVIEW

Existing literature pertaining to the project region was reviewed prior to the initiation of the field surveys. This literature review included a determination of the potential soils types on-site based on the U.S. Department of Agriculture Soil Conservation Service map for the project area; a database query of potential on-site sensitive species based on a determination of the site physical characteristics (including eco-region, elevation, soils/substrate, and topography); and documentation of California Natural Diversity Database (CNDDB)/U.S. Fish and Wildlife Service (USFWS) Geographical Information System (GIS) records for the project vicinity. Applicable information was

used to assess the presence or potential for presence of sensitive habitats and species on the project site.

SURVEY DATES, TIMES, AND CONDITIONS

M&A biologists conducted biological surveys of the site from November 2003 to March 2007. A detailed list of survey types, dates, times, and conditions are included in Table 1.

Table 1. Summary of Biological Survey Dates, Times, Conditions, and Biologists

Biological Survey	Date	Time	Conditions (start to end)	Biologist(s)
General Biological Survey	10 November 2003	1015-1345	Weather: 100%-100% cc Wind: 0-0 BS Temperature: 68°-68° F	*Vanessa A Lee Rebecca R. Atiles
Ground-Truthing Survey	18 November 2005	0900-1000	Weather: 0%-0% cc Wind: 0-0 BS Temperature: 75°-75° F	*Bonnie L. Peterson Rebecca R. Atiles
Jurisdictional Wetland Delineation	7 April 2006	1500-1730	Weather: 10%-10% cc Wind: 1-1 BS Temperature: 75°-75° F	Rebecca R. Atiles Amanda K. Gonzales
Rare Plant Survey #1	7 April 2006	1500-1730	Weather: 10%-10% cc Wind: 1-1 BS Temperature: 75°-75° F	Rebecca R. Atiles Amanda K. Gonzales
Rare Plant Survey #2	16 May 2006	0630-0745	Weather: 100%-100% cc Wind: 1-1 BS Temperature: 58°-58° F	Rebecca R. Atiles Amanda K. Gonzales
Ground-Truthing Survey	7 March 2007	0720-0830	Weather: 30%-50% cc Wind: 0 BS Temperature: 60°-62° F	Amanda K. Gonzales

cc = cloud cover; BS = Beaufort Scale; F = Fahrenheit
*County Approved Biologist (prior to September 26, 2006)

GENERAL BIOLOGICAL AND GROUND-TRUTHING SURVEYS

Vegetation communities and sensitive resources were recorded using a Trimble® geoexplorer GPS unit with submeter accuracy, plotted on an aerial photograph of the site (with topographical overlay) and then digitized into ArcView GIS version 3.2a. Most of the site was surveyed on foot; however, due to the density of vegetation in some areas and the steepness of the topography, some areas were not accessible. Inaccessible areas were viewed from advantageous viewpoints and were examined through the use of binoculars. In accordance with the County's Biological Resource Mapping Requirements, the vegetation mapping included adjoining lands within 100 feet of the subject property. The off-site mapping was based on the use of aerial imagery and observations made from on-site. The off-site areas were not surveyed on foot.

Plant identifications were either resolved in the field or later determined through verification of voucher specimens, and wildlife species were determined through direct observation (aided by binoculars), identification of songs, call notes and alarm calls, or by detection of sign (e.g., burrows, tracks, scat, etc.).

WETLAND DELINEATION

A jurisdictional wetland delineation was performed using the routine on-site determination methods noted in the 1987 U.S. Army Corps of Engineers' (ACOE) Wetland Delineation Manual (Environmental Laboratory 1987). In addition, the delineation was expanded to identify wetlands/non-wetland waters of the U.S. and streambeds under federal and state jurisdiction, respectively. Evidence supporting jurisdictional determinations was recorded on wetland field data forms and depicted in photographs of the data points. Wetland habitats and jurisdictional waterways were recorded using a Trimble® geoexplorer GPS unit with submeter accuracy and plotted on an aerial map (with topographical overlay) of the project site.

Wetland Parameters

The presence of 3 parameters was used to define an area as a wetland: 1) hydrophytic vegetation, 2) wetland hydrology, and 3) hydric soils. Atypical wetland situations were evaluated where sufficient evidence of human alteration had resulted in the covering of potential wetland parameters. In areas with atypical wetland situations, previous site inspections were used to assess if hydrophytic vegetation, wetland hydrology, and hydric soils would occur under normal conditions.

Hydrophytic Vegetation

Hydrophytic vegetation is present when vegetation communities are dominated by a preponderance (>50%) of species classified as obligate wetland plants (OBL) (estimated probability of occurring in wetlands, >99%), facultative wetland plants (FACW) (estimated probability of occurring in wetlands, 67% to 99%), or facultative plants (FAC) (estimated probability of occurring in wetlands, 33% to 67%) based on the *National List of Plant Species that Occur in Wetlands* (U.S. Fish and Wildlife Service 1988).

Wetland Hydrology

Wetland hydrology is indicated by the presence of surficial characteristics or sub-surficial hydric characteristics, showing that "the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively."

Hydric Soils

Hydric soils were examined by digging test pits and evaluating excavated soils using the chroma index from the Munsell Soil Color Charts (Munsell Color 2000). Hydric soil indicators are present when soils "have formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part."

Jurisdiction of Wetlands and Waterways

The extent of jurisdictional boundaries was determined according to the federal, ACOE and state, California Department of Fish and Game (CDFG) agency's definition of wetlands and non-wetland waters of the U.S./streambed.

U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act (CWA), the ACOE has regulatory authority over the discharge of dredged or fill materials into waters of the U.S. (33 U.S.C. 1344). The term "waters of the U.S." is defined in 33 CFR Part 328.3(a) as: (1) all navigable waters (including all waters subject to the ebb and flow of the tide); (2) all interstate waters and wetlands; (3) all other waters such as intrastate lakes, rivers, streams, (including intermittent streams), mudflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; (4) all impoundments of water mentioned above; (5) all tributaries to waters mentioned above; (6) the territorial seas; and, (7) all wetlands adjacent to waters mentioned above.

Wetlands are defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support ... a prevalence of vegetation typically adapted for life in saturated soil conditions." Therefore, to be considered a jurisdictional wetland under the ACOE, the criterion of all 3 parameters (hydrophytic vegetation, wetland hydrology, and hydric soils) must be present.

In the absence of wetlands and non-tidal waters, the limits of ACOE jurisdiction in drainages and streams extend to the ordinary high water mark (OHWM), which is defined in 33 CFR 328.3(e) as, "that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

California Department of Fish and Game

The CDFG has regulatory authority over actions that would "divert, obstruct or change the natural flow or bed, channel or bank of any river, stream or lake designated by the Department," pursuant to Section 1602 of the Fish and Game Code (Division 2, Chapter 6). The breath of jurisdiction under

the CDFG differs from the ACOE in that a "streambed" is not limited to the OHWM, but rather encompasses the entire width of the streambed, from bank to bank, regardless of the water level. In addition, jurisdictional wetlands under the CDFG require that only one wetland parameter be present, but the wetlands must be associated, within or adjacent to, a streambed. Furthermore, CDFG jurisdiction extends over "adjacent riparian habitat," including all riparian habitat supported by a river, stream or lake, even if the riparian area does not necessarily meet the hydrophytic vegetation criteria as defined by the ACOE.

County of San Diego

The County regulates wetlands under the RPO. The RPO protects County jurisdictional wetland areas by restricting development to only a few permitted uses. The jurisdictional wetland delineation was conducted in 2006, and the RPO that was current at that time defined wetlands as "all lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or where land is covered by water" (County 1991). Similar to wetlands under the jurisdiction of CDFG, RPO wetlands only require one of the 3 parameters to be present; however, RPO wetlands are not limited to those that are associated with streambeds and can be isolated. The methods used to determine each of the 3 parameters is based upon the ACOE Wetland Delineation Manual; however, the results must take into account that the County definition of a wetland differs from the federal and CDFG definitions. According to the RPO, all lands having one or more of the following attributes are "wetlands":

1. At least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places periodically devoid of oxygen);
2. The substratum is predominantly undrained hydric soil; or
3. The substratum is a non-soil and is saturated with water or covered by water at some time during the growing season of each year.

The County does not define either "undrained" or "non-soil" within the RPO (or any other ordinance or guidance document). Thus, this report incorporates accepted definitions or characterizations of these terms from the ACOE Field Guide for Wetland Delineation (1987) and the Soil Science Society of America (2006), respectively. For the purposes of this report, "undrained" has been defined as a condition in which ground or surface water has not been reduced or eliminated from an area by artificial means. Furthermore, "soil" has been defined as the unconsolidated mineral or organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

In addition to wetlands, the RPO contains provisions regarding permitted uses and development criteria for wetland-related habitats, such as wetland buffers, floodways, and floodplain fringes. The RPO defines a wetland buffer as, "Lands which provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community."

FOCUSED RARE PLANT SURVEYS

Focused rare plant surveys were conducted by examining the appropriate habitat in which the plants occur twice; the first survey was conducted between March and April and the second survey conducted between May and June when most reproductive structures (i.e., flowers and fruits) and

distinctive leafy parts were present and easily identifiable. Biologists walked transects in areas with suitable soils and/or vegetation.

SURVEY LIMITATIONS

Biological inventories are generally subject to various limitations. Depending on the season during which the field survey is conducted, some species of annual plants, invertebrates, amphibians, reptiles, migratory birds, and mammals may be difficult to inventory. Biological surveys conducted have been diurnal and performed during the fall and spring seasons. Surveys specific to crepuscular and nocturnal wildlife were not conducted on-site. In addition, wildlife corridor ecology studies were not performed as part of this investigation. Therefore, some nocturnal species may not have been detected.

However, based on the literature review performed, as well as the knowledge of species-specific habitat requirements and distribution patterns, the probability of these species' being present on or utilizing the site can be fairly accurately predicted. Database (e.g., CNDDB and USFWS GIS database) and literature reviews were performed to compensate for potential limitations.

SCIENTIFIC NOMENCLATURE

Scientific nomenclature used in this report is from the following references: vegetation, Holland (1986) and Oberbauer (1996); flora, Rebman and Simpson (2006); butterflies, Opler and Wright (1999 and 2006); amphibians and reptiles, Crother et al. (2001 and 2003); birds, American Ornithologists' Union (1998 and 2006); and mammals, Wilson and Reeder (1993).

RESULTS

VEGETATION COMMUNITIES AND BOTANICAL RESOURCES

During M&A's first biological survey conducted in 2003, six vegetation communities were observed within the parcel boundary: southern coast live oak riparian forest, southern mixed chaparral, non-native vegetation, disturbed habitat, urban/developed lands, and extensive agriculture. The area mapped as disturbed habitat was primarily bare ground with scattered invasive, exotic, broad-leaf, herbaceous species, as well as remnant avocado tree stumps, and it was presumed that the majority of the project site had previously been an avocado grove. It was also noted that portions of the land were disced along the northern edge of the area mapped as disturbed habitat, near the boundary of the southern mixed chaparral, and large amounts of buried and partially buried refuse, mostly consisting of concrete rubble, pipes, wooden boards, plastic and rubber tubing, rebar, and metal scraps, were found in the eastern portion of the site. According to personal communication with the property owner, C. Kirkorowicz, the purpose of the discing was to comply with fire clearing requirements issued from the County, and the eastern end of the site had been used as a private landfill or dumping ground by previous landowners; however, it was unknown when the site was historically cleared for the avocado grove or when the avocado grove was cleared resulting in the disturbed habitat, and this clearing was presumed to have occurred prior to the 1990's by previous property owner(s).

M&A conducted an updated ground-truthing survey in 2005, per the request of C. Kirkorowicz, due to the conversion of some of the land, previously mapped as disturbed habitat, to active agriculture (e.g., papyrus). According to personal communication with C. Kirkorowicz, the papyrus field had

been actively farmed for approximately one year prior to the biological survey. M&A verified with a Trimble® geoexplorer GPS unit that the boundary of the nearby native, southern mixed chaparral and southern coast live oak riparian forest had not changed from the previous biological survey.

In response to issuance of the County initial project application review/scoping letter in 2006, M&A conducted a jurisdictional wetland delineation and focused rare plant surveys on the property, and the areas previously mapped as disturbed habitat and active agriculture were determined to have remained the same.

In early 2007, M&A conducted an updated field truthing survey and determined that the area previously mapped as disturbed habitat now met the County's current definition of non-native grassland, based on the predominance of non-native, annual grass species.

In response to issuance of the County biology comments in mid and late 2007, as well as discussions between M&A and County biologists, it has now been concluded that the project site should be mapped according to the vegetation believed to have been historically on the site, since evidence of permits authorizing the historical clearing can not be obtained. The previously mapped areas of disturbed habitat/non-native grassland, non-native vegetation, and active agriculture have now been mapped as southern mixed chaparral, which based on old aerials and the current surrounding vegetation, is presumed to be the habitat that historically covered the project site (Table 2; Figure 2).

Appendix 1 includes a complete list of flora species observed on-site.

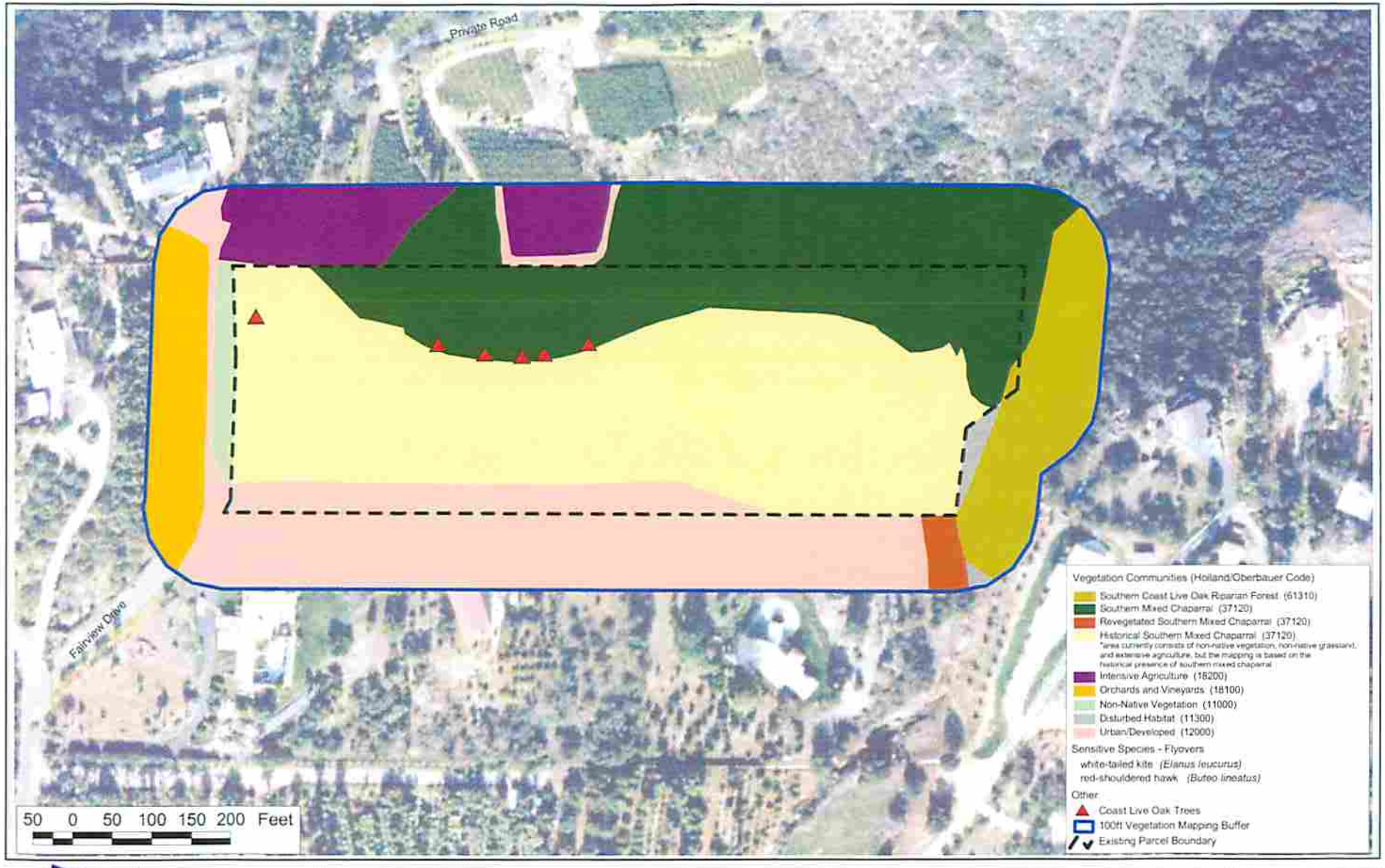
Table 2. Summary of the Vegetation Types Present within the Parcel Boundary

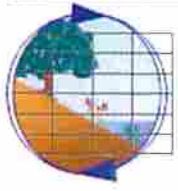
Vegetation Type	Holland/Oberbauer Code	Acreage
Southern Coast Live Oak Riparian Forest	61310	0.16
Southern Mixed Chaparral	37120	2.39
*Historical Southern Mixed Chaparral	37120	4.20
Urban/Developed	12000	0.46
	TOTAL	**7.21**

*area currently consists of non-native vegetation, non-native grassland, and extensive agriculture, but the mapping is based on the historical presence of southern mixed chaparral

Southern Coast Live Oak Riparian Forest (Holland/Oberbauer Code 61310)

Southern coast live oak riparian forest is located off-site, adjacent to the eastern boundary of the property, and a small portion of the riparian canopy, comprised of coast live oak (*Quercus agrifolia*) trees, overhangs the central, eastern corner of the site. Species present in the understory, along the bank, primarily include German ivy (*Delairea odorata*), bristly ox-tongue (*Picris echioides*), western poison oak (*Toxicodendron diversilobum*), and greater periwinkle (*Vinca major*). Immediately adjacent to the project site, the southern coast live oak riparian forest is relatively sparse, consisting of several coast live oaks that do not appear to have reached maturity; however, as this habitat continues off-site to the northeast, it becomes more of a mature woodland with a better developed canopy and understory.





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Biological Resources Map

Kirkorowicz Property

Figure 2

Merkel & Associates, Inc.

Southern Mixed Chaparral (Holland/Oberbauer Code 37132)

Although the underlying substrate consists of Las Posas soils, the southern mixed chaparral on-site is not mapped as "mafic" based on the lack of indicator floral species for this sensitive habitat type. The southern mixed chaparral is dominated by species such as chamise (*Adenostoma fasciculatum*), black sage (*Salvia mellifera*), mission manzanita (*Xylococcus bicolor*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), and bushrue (*Cneoridium dumosum*). Several coast live oaks occur in a narrow line along the southern edge of this habitat. The oaks here are relatively young, based upon their size, reaching no more than 15 feet in height, with approximate dbhs (diameter at breast height) of less than six inches. For the purposes of habitat mapping, based on the lack of a mature, closed canopy structure typical of most oak woodland habitat, these oaks have been mapped individually within southern mixed chaparral habitat (Figure 2).

Urban/Developed (Oberbauer Code 12000)

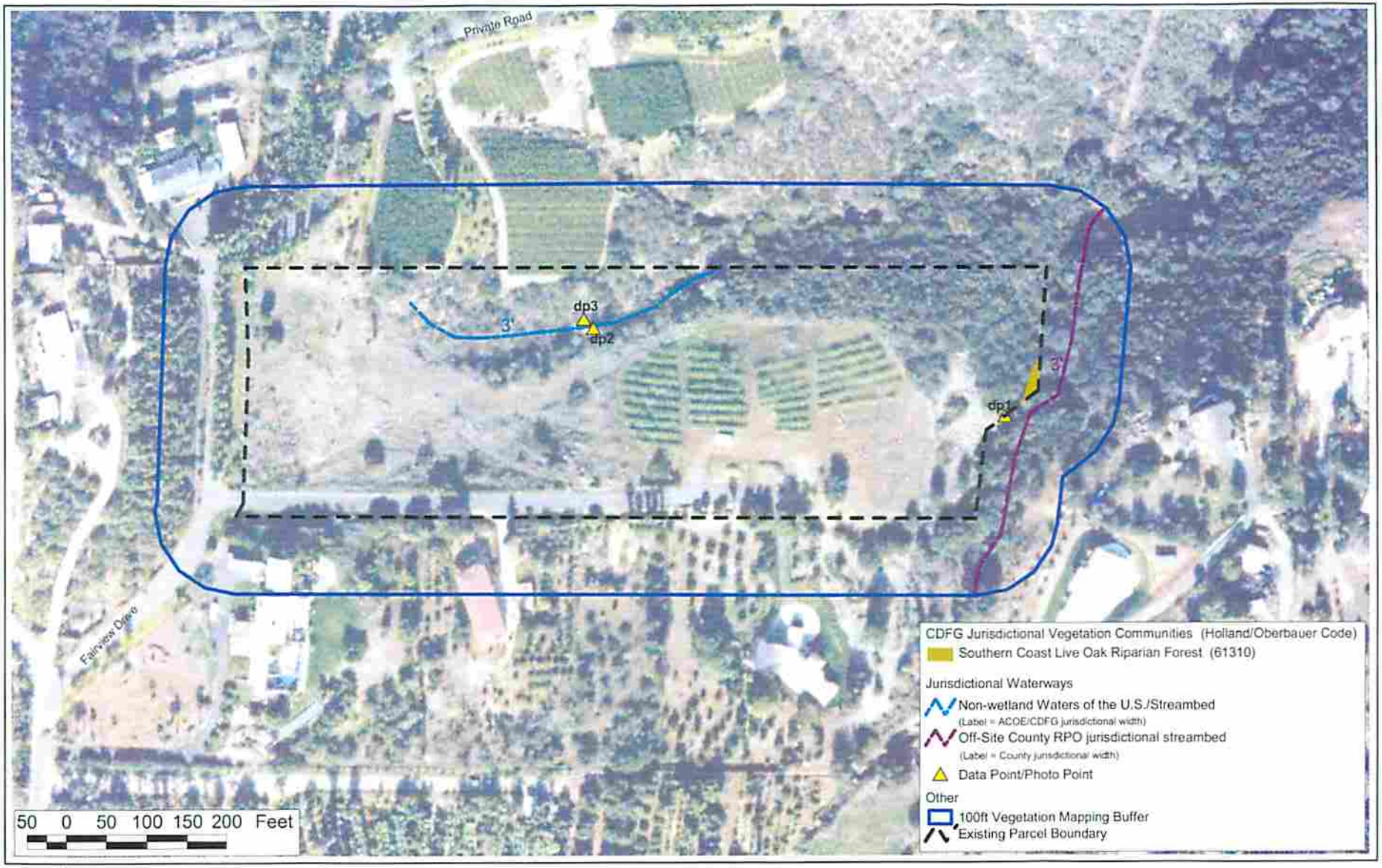
The on-site area mapped as urban/developed consists of a paved, private road that runs along the southern boundary of the property. The off-site area to the south, mapped as urban/developed, consists of residential development and associated landscaping.

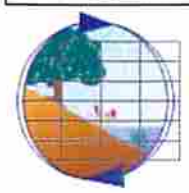
JURISDICTIONAL WETLAND AND NON-WETLAND RESOURCES

No jurisdictional wetland habitats subject to regulation under section 404 of the CWA have been identified within the site; however, one drainage within the property boundary has been delineated as a non-wetland water of the U.S./streambed, within which, activities would be subject to regulation under section 404 of the CWA (Table 3; Figure 3). In addition, the small portion of the eastern corner of the property, mapped as southern coast live oak riparian forest, would be subject to regulation per section 1602 of the CDFG Code. Wetland field data forms and photo points are provided as Appendices 2 and 3, respectively.

Table 3. Quantitative Summary of Jurisdictional Resources Present within the Parcel Boundary

Jurisdictional Resource	ACOE and CDFG Jurisdictional Acreage	CDFG Only Jurisdictional Acreage	County RPO Jurisdictional Acreage
Non-wetland Waters of the U.S./Streambed	0.03	0.00	0.00
Southern Coast Live Oak Riparian Forest	0.00	0.01	0.00
Grand Total	**0.03**	**0.01**	**0.00**





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Jurisdictional Wetland Resources Map

Kirkorowicz Property

Figure 3

Merkel & Associates, Inc.

Non-Wetland Waters of U.S./Streambeds

A non-wetland, ephemeral drainage occurs in the northwestern portion of the site, cuts through southern mixed chaparral, and eventually runs off-site east of the property. Defined high water marks of 3 feet were evidenced by incised cuts and overall drainage patterns.

Soil testing in this area indicated non-hydric soils over cobble; however, drainage patterns were evident. This area falls under ACOE jurisdiction as a non-wetland water of the U.S. and under CDFG as a streambed.

Southern Coast Live Oak Riparian Forest

The portion of the southern coast live riparian forest canopy that overhangs the central, eastern corner of the property is approximately 15 feet from the off-site, ephemeral streambed, located down slope, at the nearest point from the property boundary. The off-site streambed would be jurisdictional under the County RPO, up to the Ordinary High Water Mark (OHWM). The associated habitat within and above the OHWM predominantly consists of oak trees with an understory of non-native lianas and upland shrubs; therefore, this habitat would not be expected to meet the definition of hydrophytic vegetation or hydric soils, and thus, would not be jurisdictional under the County RPO.

The portion of the oak tree canopy that overhangs the property would be jurisdictional under the CDFG, because CDFG jurisdiction extends over "adjacent riparian habitat," which includes all riparian habitats supported by a river, stream or lake, even if the riparian area does not necessarily meet the hydrophytic vegetation criteria as defined by the ACOE.

Wetlands and Jurisdictional Waters - Functions and Values

The on-site drainage is an ephemeral tributary within the San Luis Rey Watershed.

This resource is classified as a non-wetland water; however, in terms of functionality as an ephemeral drainage that eventually conveys runoff off-site, to the San Luis Rey watershed, the low-velocity flows, along with the lack of herbaceous vegetation, do not allow for high sediment retention and groundwater recharge. Furthermore, due to the narrow position of the drainage and lack of a riparian canopy, floodflow alteration is expected to be moderate. Streambed stabilization is low as well, due to the seasonal presence of flowing water and moderate erosion issues on-site. The site is expected to have low chemical functions. The high-velocity flows and lack of herbaceous vegetation and non-hydric soils do not allow for high toxicant retention and nutrient transformation. The site possesses moderate to low potential for production export (i.e., the flushing of organic plant material into downstream waters).

WILDLIFE HABITAT AND ZOOLOGICAL RESOURCES

Locally common species of reptiles, birds, and mammals were noted within the study area during the biological surveys (Appendix 4). These include western fence lizard (*Sceloporus occidentalis*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), California ground squirrel (*Spermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*). Other species observed include Anna's hummingbird (*Calypte anna*), western scrub-jay (*Aphelocoma californica*), and

California towhee (*Pipilo crissalis*), which are relatively prevalent in the appropriate habitat, such as the southern mixed chaparral on-site.

Two raptor species were detected in the vicinity of the site. A white-tailed kite (*Elanus leucurus*) was observed flying high over the site, and a red-shouldered hawk (*Buteo lineatus*) was heard calling off-site to the northeast, outside of the study area boundary.

A dusky-footed woodrat (*Neotoma fuscipes*) nest was also observed in the southern mixed chaparral on the eastern portion of the property. Based upon the structure and placement of the nest, typical of dusky-footed woodrats, and the presence of woodrat scat found in the vicinity the nest, the nest is still presumed to be active, although no woodrats were observed during the surveys.

The project site is located at the southwestern tip of a canyon 'finger', where the habitat continues off-site and connects to Gopher Canyon approximately 1,000 feet to northeast; rural development surrounds the remaining boundaries of the property, preventing connectivity to the southwest. The habitat along Gopher Canyon (off-site to the northeast) then continues approximately 4,500 feet towards the northwest, where it connects with the San Luis Rey River regional wildlife corridor across Old River Road. The San Luis Rey River corridor is fairly constrained by surrounding development but does serve as an important linkage to areas of extensive open space on Camp Pendleton to the southwest, and National Forest lands to the northeast, and primarily supports meso-predators and larger mammals such as coyote (*Canis latrans*) and bobcat (*Lynx rufus*), and possibly mountain lion (*Felis concolor*). The habitat along Gopher Canyon also continues to the southeast where there are some larger areas of open space prior to reaching Interstate 15. While the project site connects to the Gopher Canyon corridor, it does not facilitate connectivity beyond the project site, but dead-ends with the small, on-site box canyon.

SPECIAL STATUS SPECIES

Sensitive plants include those listed by USFWS (1999), CDFG (2006 and 2007), County (2006), and the California Native Plant Society (CNPS) (CNPS 2001); sensitive wildlife species include those listed by USFWS (1999), CDFG (2006 and 2007).

No sensitive plant species were identified on the project site during the focused surveys.

Two confirmed sensitive fauna species were observed during the biological surveys, the white-tailed kite and red-shouldered hawk. The white-tailed kite, which is designated as a fully protected species by the CDFG, quickly passed over the site, and did not stop to forage. A red-shouldered hawk, which is designated as a County Group 1 sensitive species, was heard calling from off-site, to the northeast. Based on the lack of mature woodlands or trees on-site, these species are not expected to nest on or within the immediate vicinity of the site.

The CNDDB was queried, and no sensitive species sightings were reported on-site or in the immediate vicinity (CDFG 2006). Given the state of disturbance over most of the site, few sensitive species are expected to occur on-site. Table 4 summarizes the potential for occurrence of rare, endangered, endemic, and/or sensitive species (based on habitat, site location, elevation, soils/substrate, and topography) within the study area.

Table 4. Sensitive Species Not Observed But Potentially Present on the Kirkorowicz Site

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
PLANTS					
Acanthomintha ilicifolia	San Diego thorn mint	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/clay; elevation 10-935 meters; annual herb; blooms April to June	ESA: FT CESA: SE CNPS List: 1B County List: A	Low Potential	Preferred habitat is not present within the study area; the chaparral on-site is dense and no friable or broken clay soils occur on-site. **Spring 2006 surveys did not detect this species.**
Adolphia californica	California adolphia	Chaparral, coastal scrub, valley and foothill grassland/clay; elevation 45-300 meters. Shrub (deciduous), blooms December-May	CNPS List: 2 County List: B	Low Potential	This species is fairly conspicuous, and would be easily detectable if present within the study area. Appropriate habitat does not occur within the study area. This species was not detected during any of the biological surveys conducted on-site, including **Spring 2006 surveys.**
Ambrosia pumila	San Diego ambrosia	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/often in distributed areas; elevation 20-415 meters. Perennial herb (rhizomatous), blooms May-September	ESA: FE CNPS List: 1B County List: A	Low Potential	Appropriate habitat for this species does not occur within the study area (e.g., creek beds, seasonally dry drainages, willow woodland; no riverwash or sandy alluvium soils). **Spring 2006 surveys did not detect this species.**
Brodiaea filifolia	thread-leaved brodiaea	Chaparral (openings), cismontane woodlands, coastal scrub, playas, valley and foothill grassland, vernal pools/ often clay; elevation 40-1220 meters. Perennial herb (bulbiferous), blooms March-June	ESA: FT CESA: SE CNPS List: 1B County List: A	Low Potential	Appropriate habitat for this species does not occur, as there are no clay soils or annual grasslands within the study area. **Spring 2006 surveys did not detect this species.**
Brodiaea orcuttii	Orcutt's brodiaea	Closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools/mesic, clay, sometimes serpentinite; elevation 30-1615 meters. Perennial herb (bulbiferous), blooms May-July	CNPS List: 1B County List: A	Low Potential	Appropriate habitat for this species does not occur within the study area (e.g., moist grasslands, vernal pools, stream embankments). **Spring 2006 surveys did not detect this species.**

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
Camissonia lewisii	Lewis's evening-primrose	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrubs, valley and foothill grassland/sandy or clay; elevation 0-300 meters	CNPS List: 3 County List: C	Low Potential	Although there are sandy soils on-site, the site is not in the vicinity of the beach or any beach bluffs, which is the appropriate habitat for this species. **Spring 2006 surveys did not detect this species.**
Ceanothus verrucosus	wart-stemmed ceanothus	Chaparral; elevation 1-380 meters. Shrub (evergreen), blooms December-April	CNPS List: 2 County List: B	Low Potential	This species is usually very conspicuous in the areas where it occurs, and would, therefore, be easily detectable if present within the study area. This species was not detected during any of the biological surveys conducted on-site, including **Spring 2006 surveys.**
Chorizanthe leptotheca	peninsular spineflower	Chaparral, coastal scrub, lower montane, coniferous forest/alluvial fan, granitic; elevation 300-1900 meters. Annual herb, blooms May-August	CNPS List 4 County List D	Low Potential	If present, this species would be limited to the southern mixed chaparral on-site. **Spring 2006 surveys did not detect this species.**
Chorizanthe procumbens	prostrate spineflower	chaparral, coastal scrub	Delisted	Low Potential	If present, this species would be limited to the southern mixed chaparral on-site. **Spring 2006 surveys did not detect this species.**
Clarkia delicata	delicate clarkia	Chaparral, cismontane woodland; elevation 235-1000 meters. Annual herb, blooms April-June	CNPS List 1B County List A	Low Potential	Limited oak edge habitat available. **Spring 2006 surveys did not detect this species.**
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	Chaparral; elevation 30-550 meters. Shrub (evergreen), blooms April-June	CNPS List: 1B County List: A	Low Potential	This species is fairly conspicuous in the areas where it occurs, and would have most likely been detected if it were present within the study area. This species was not detected during any of the biological surveys conducted on-site, including **Spring 2006 surveys.**

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
Convolvulus simulans	small-flowered morning glory	Chaparral (openings), coastal scrub, valley and foothill grassland/clay, serpentine seeps; elevation 30-700 meters. Annual herb, blooms March-July	CNPS List: 4 County List: D	Low Potential	Preferred habitat is not present within the study area; the chaparral on-site is dense and no friable clay soils occur on-site. **Spring 2006 surveys did not detect this species.**
Dichondra occidentalis	western dichondra	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; elevation 50-500 meters. Perennial herb (rhizomatous), blooms March-July	CNPS List: 4 County List: D	Low Potential	If present, this species would be limited to the southern mixed chaparral on-site; although no rocky outcrops or recently burned area exists within the study area. **Spring 2006 surveys did not detect this species.**
Dudleya viscida	sticky dudleya	Coastal bluff scrub, chaparral, coastal scrub/rocky; elevation 10-550 meters. Perennial herb, blooms March-June	CNPS List: 1B County List: A	Low Potential	No gabbroic rock present within the study area. Not expected to occur on-site. **Spring 2006 surveys did not detect this species.**
Holocarpha virgata ssp. *elongata*	graceful tarplant	Cismontane woodland, coastal scrub, valley and foothill grassland; elevation 60-1100 meters. Annual herb, blooms July-November	CNPS List: 4 County List: D	Low Potential	No grassland habitat occurs on-site, so if this species were present, it would be fairly conspicuous in the open disturbed habitat, and would be easily detectable if present within the study area. This species was not detected during any of the biological surveys conducted on-site, including **Spring 2006 surveys.**
Juncus acutus ssp. *leopoldii*	spiny rush/ southwestern spiny rush	Coastal dunes (mesic), meadows and seeps (alkaline seeps), marshes and swamps (coastal salt); elevation 3-900 meters. Perennial herb, (rhizomatous) blooms May-June	CNPS List: 4 County List: D	Low Potential	Appropriate habitat does not occur on-site. This species is fairly conspicuous, and would be easily detectable if present within the study area. This species was not detected during any of the biological surveys conducted on-site, including **Spring 2006 surveys.**

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	Chaparral, coastal scrub; elevation 1-500 meters. Annual herb, blooms January-July	CNPS List: 1B County List: A	Low Potential	If present, this species would be limited to openings in the southern mixed chaparral on-site. As the chaparral on-site is relatively dense, the only potential area for occurrence on-site would be along the edge where it meets disturbed habitat. **Spring 2006 surveys did not detect this species.**
Machaeranthera juncea	rush-like bristleweed	Chaparral, coastal scrub; elevation 240-1000 meters. Perennial herb, blooms June-January	CNPS List 4 County List D	Low Potential	If present, this species would be limited to the southern mixed chaparral on-site. **Spring 2006 surveys did not detect this species.**
Microseris douglasii ssp. *platycarpha*	small flower microseris	Cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools/clay; elevation 15-1070 meters. Annual herb, blooms March-May	CNPS List: 4 County List: D	Low Potential	Although this species is fairly inconspicuous, and not easily detectable due to its short flowering period, appropriate habitat does not occur on-site as there are no grasslands, vernal pools, or clay lenses within the study area. This species was not detected during any of the biological surveys conducted on-site, including **Spring 2006 surveys.**
Navarretia fossalis	prostrate navarretia/ spreading navarretia	Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools; elevation 30-1300 meters. Annual herb, blooms April-June	ESA: FT CNPS List: 1B County List: A	Low Potential	No vernal pools or swales occur within the study area. This species would not be expected to occur within the study area based on lack of appropriate/preferred habitat.
Piperia cooperi	Cooper piperia/ Cooper's rein orchid/ chaparral rein orchid	Chaparral, cismontane woodland, valley and foothill grassland; elevation 15-1585 meters	CNPS List: 4 County List: D	Low Potential	Limited appropriate habitat occurs on-site. The eastern end of the property where the coast live oak canopy overhangs the fenceline is covered in dense exotics. **Spring 2006 surveys did not detect this species.**

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
Selaginella cinerascens	ashy spike-moss	chaparral, coastal scrub; often in association with rock outcrops	Delisted County List D	Low Potential	If present, this species would be limited to the southern mixed chaparral on-site. **Spring 2006 surveys did not detect this species.**
INVERTEBRATES					
Danaus plexippus	Monarch	Roosts are located in wind-protected tree groves, eucalyptus (*Eucalyptus* spp.), Monterey pine (*Pinus radiata*) and cypress (*cypress* spp.) with nectar and water sources nearby	Other: Special Animal County List B	Low Potential	Suitable habitat is present on-site and in the vicinity.
Lycaena hermes	Hermes copper	Openings in chaparral, associated with the larval host plant Spiny Redberry (*Rhamnus crocea*), adults feed on nectar from Flat-top Buckwheat	Other: Special Animal County Group: 1	Low Potential	Colonies of hermes copper are closely confined to the vicinity of the host plant *Rhamnus crocea* (Hogan 2004); and no host plant was identified on the site during the biological surveys
AMPHIBIANS					
Spea (=Scaphiopus) hammondii	western spadefoot	Prefers sandy or gravelly soil in grasslands, sage scrub, open chaparral, and pine-oak woodlands; grasslands with shallow temporary pools are optimal	DFG: CSC Other: Special Animal County Group: 2	Low Potential	No natural or artificial shallow pools that could be used for breeding occur on-site. However, disbursing individuals from adjacent properties with breeding pools could use the site for seasonal estimation sites.
REPTILES					
Anniella pulchra pulchra	silvery legless lizard	Shows a preference for areas of leaf litter and loose soil along washes, beach sand dunes, open scrub and woodland, and sandy benches along alluvial fans	DFG: CSC Other: Special Animal County Group: 2	Low Potential	No sand deposit habitat occurs on-site. Soils with high sand content are important for locomotion and prey detection and capture for this species.
Aspidoscelis (=Cnemidophorus) hyperythra beldingi	orange-throated whiptail	Sage scrub, and chaparral, prefers sandy areas with patches of brush and rocks; may be associated with buckwheat and Black Sage	DFG: CSC Other: Special Animal County Group 2	Low Potential	This species is typically associated with sage scrub. Although limited habitat for this species may occur within the southern mixed chaparral vegetation, the density of the brush may preclude this species from occurring in those portions that occur on-site.

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
Aspidoscelis (=Cnemidophorus) tigris stejnegeri	coastal western whiptail	sage scrub, chaparral, and grasslands	Other: Special Animal County Group: 2	Moderate Potential	If present, this species would mostly be limited to the southern mixed chaparral on-site, though it may occasionally utilize disturbed habitat.
Charina (=Lichanura) trivirgata	rosy boa	Rocky outcrop areas within chaparral and sage scrub	Other: Special Animal County Group: 2	Low Potential	This species may occur in or be associated with the rock outcroppings embedded within the sparse patches of southern mixed chaparral.
Coleonyx variegatus abbotti	San Diego banded gecko	Areas of rock outcrop within sage scrub and chaparral	Other: Special Animal County Group: 1	Low Potential	Limited habitat for this species occurs near the edges of the site within the southern mixed chaparral vegetation.
Crotalus ruber ruber	northern red diamond rattlesnake	Occupies rocky outcrops and areas of heavy brush or rugged terrain in chaparral, sage scrub, or desert scrub on both coastal and desert slopes, usually below 4000 feet	DFG: CSC County Group: 2	Moderate Potential	If present, this species would be limited to the southern mixed chaparral on-site.
Diadophis punctatus similis	San Diego ringneck snake	Chaparral, forest, and grasslands, most common in moist, rocky areas	Other: Special Animal County Group: 2	Low Potential	This species requires mesic conditions to maintain proper water balance and procure slender salamander and earthworm prey. If this species occurs on site it would be in areas of nearly continuous damp conditions.
Eumeces skiltonianus interparietalis	Coronado skink	Variety of habitats including grasslands, sage scrub, and various woodlands including oak, pine, juniper, and riparian	DFG: CSC Other: Special Animal County Group: 2	Moderate Potential	Potentially suitable habitat on and adjacent to site
Phrynosoma coronatum blainvillii	San Diego horned lizard	Chaparral, sage scrub, oak woodlands, and grasslands; sometimes occurs along seldom used dirt roads where native ant species are prevalent	DFG: CSC Other: Special Animal County Group: 2	Moderate Potential	If present, this species would be limited to the southern mixed chaparral on-site.
Salvadora hexalepis virgultea	coast patch-nosed snake	Chaparral and sage scrub; may require mammal burrows or woodrat nests for overwintering	DFG: CSC County Group: 2	Moderate Potential	If present, this species would be predominantly limited to the southern mixed chaparral on-site.

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
BIRDS					
**Accipiter cooperii*	Cooper's hawk	Oak, riparian deciduous or other woodland habitats usually near water	DFG: CSC Other: Special Animal County Group: I	Moderate Potential	Project site could support potential foraging habitat, adjacent to the oak riparian habitat off-site, which could support potential nesting sites.
**Accipiter striatus*	sharp-shinned hawk	Mixed woodlands near open areas, prefers but not restricted to riparian habitats	DFG: CSC Other: Special Animal County Group: I	Moderate Potential	Project site could support potential foraging habitat, adjacent to the oak riparian habitat off-site, which could support potential nesting sites.
**Agelaius tricolor*	tricolored blackbird	Feeds in grasslands and croplands, breeds near freshwater preferably in marshes or other emergent wetlands	DFG: CSC Other: Special Animal County Group: I	Low Potential	Potential freshwater marsh breeding habitat could occur along the riparian corridor off-site, but no suitable habitat was observed adjacent to the site from the property boundary.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	Rocky hillsides supporting sparse, low scrub or chaparral, sometimes mixed with grasses	DFG: CSC Other: Special Animal County Group: I	Moderate Potential	If present, this species would be limited to the southern mixed chaparral on-site.
Ammodramus savannarum	grasshopper sparrow	Occurs in native grassland or mixed grassland/sage scrub. Good indicators are extensive stands of blue-eyed-grass (*Sisyrinchium bellum*) and common goldenstar (*Bloomeria crocea*)	Other: Special Animal County Group: I	Low Potential	Appropriate habitat for this species does not occur on-site.
Amphispiza belli belli	Bell's sage sparrow	Relatively open chaparral (e.g. chamise chaparral) and sage scrub; Non-fragmented, contiguous areas on relatively flat terrain appear to be preferred	DFG: CSC Other: Special Animal County Group: I	Low Potential	If present, this species would be limited to the dense southern mixed chaparral on-site.
**Aquila chrysaetos*	golden eagle	Nests in cliffs (or trees), found in generally mountainous or hilly terrain; forages in grasslands, deserts, and shrubby habitats	DFG: CSC, FP Other: Special Animal County Group: I	Low Potential	Foraging habitat present on-site not abundant. Does not nest on-site.
**Ardea herodias*	great blue heron	Rookeries located in tall trees near water	Other: Special Animal	Low Potential	Low potential to occur on-site, but could potential be present along adjacent riparian corridor.

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
Athene cunicularia	burrowing owl	Occurs in open dry grasslands, agricultural, rangelands and desert habitats. Inhabit grass, forb and shrub stages of pinyon and ponderosa pine habitats as well as airports, golf courses, and vacant urban lots	DFG: CSC Other: Special Animal County Group: 1	Low Potential	No evidence of potentially suitable burrows was identified on-site, and it was noted that the site is utilized by dogs which would limit potential use of the site by burrowing owl.
**Buteo regalis*	ferruginous hawk	Dry, open habitats, typically grasslands	DFG: CSC Other: Special Animal County Group: 1	Low Potential	Foraging habitat present on-site not significant.
Cathartes aura	turkey vulture	Open habitats with protected large trees, snags, rock outcrops, or cliffs for nesting	County Group: 1	Low Potential	Limited potential foraging habitat present on-site. Not expected to nest on-site.
**Circus cyaneus*	northern harrier	Occurs in grassland, agricultural fields, fresh and saltwater mashes and desert sinks	DFG: CSC Other: Special Animal County Group: 1	Low Potential	Project site could support potential foraging habitat, but potential nesting habitat no present on-site and not observed along the adjacent riparian corridor from the property boundary.
Eremophila alpestris actia	California horned lark	Grasslands, disturbed areas and open habitats with sparse, low vegetation	DFG: CSC Other: Special Animal County Group 2	Moderate Potential	Suitable habitat is present on-site and in the vicinity.
**Falco columbarius*	merlin	Located around agricultural fields, grasslands, and mudflats. Winter visitor to the San Diego County area	DFG: CSC Other: Special Animal County Group: 2	Moderate Potential	Potentially suitable habitat present on-site.
**Falco mexicanus*	prairie falcon	Open grassland, agricultural fields and desert scrub	DFG: CSC Other: Special Animal County Group: 1	Moderate Potential	Project site could support potential foraging habitat. Potential nesting habitat limited on-site, but could nest along adjacent riparian corridor.
**Lanius ludovicianus*	loggerhead shrike	Found within grassland or open habitats with bare ground and sparse shrub and/or tree cover for nesting and perching	DFG: CSC Other: Special Animal County Group: 1	Moderate Potential	Suitable habitat is present on-site and in the vicinity.
**Larus californicus*	California gull	Occurs in open ocean, beaches, bays, estuaries, lagoons, as well as garbage dumps, agricultural fields, and freshwater ponds and lakes	DFG: CSC Other: Special Animal County Group: 2	Low Potential	Limited potentially suitable/preferred habitat present on or adjacent to site.

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
Sialia mexicana	western bluebird	Open woodlands, farmlands, and orchards	County Group: 2	Moderate Potential	Suitable habitat is present on-site and in the vicinity.
Tyto alba	barn owl	Agricultural and residential areas, grassland, riparian and oak woodland, and in broken chaparral near sandstone bluffs; avoids dense forests and open desert habitats	County Group: 2	Moderate Potential	Potentially suitable habitat present on-site.
MAMMALS					
Antrozous pallidus	Pallid bat	Utilizes open forest and grassland habitats for feeding and multiple habitats for roosting	DFG: CSC Other: Special Animal County Group: 2	Low Potential	No grassland on-site and limited roosting area opportunities; forages at tree canopy height.
Chaetodipus californicus femoralis	Dulzura (California) pocket mouse	Found in areas of fine sandy ground, (chaparral/coastal sage scrub)	DFG: CSC Other: Special Animal County Group: 2	Low Potential	No potentially suitable habitat/soils present on-site.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	Found in coastal sage scrub.	DFG: CSC Other: Special Animal County Group: 2	Low Potential	No potentially suitable habitat/soils present on-site.
Eumops perotis	western mastiff bat	Extensive open areas with abundant roost locations in rock outcrops, (found where oaks and chaparral occur)	DFG: CSC Other: Special Animal County Group: 2	Low Potential	No steep rocky cliff roosting habitat on site; forages at tree canopy height.
Felis concolor	mountain lion	Chaparral or woodland habitats with requisite areas of riparian vegetation and interspersions of rock outcrops and irregular terrain where deer are present	County Group: 2	Low Potential	Due to suitable habitat for southern mule deer, its primary prey, it is possible that a mountain lion may utilize the habitats in the general area. However, as development in the area increases the likelihood for it to occur on site declines as a result of light, noise and other human disturbances.

Scientific Name	Common Name	Habitat	Sensitivity Listings	Site Status	Comments
Lasiurus blossevillii	western red bat	Occurs in CA in coastal lowlands and roosts in large shrubs and fruit trees.	Other: Special Animal County Group: 2	Low Potential	Due to the lack of mature riparian woodlands or clusters of large ornamental trees for roosting and open waters for foraging it is unlikely that this species occurs on site.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	Relatively open chaparral and sage scrub and grasslands	DFG: CSC Other: Special Animal County Group: 2	Low Potential	If present, this species would mostly be limited to the dense southern mixed chaparral on-site, though it may occasionally utilize non-native grassland.
Macrotus californicus	California leaf-nosed bat	Roosts in rocky, rugged terrain with mines and caves and forages over nearby flats and washes.	DFG: CSC Other: Special Animal County Group: 2	Not present	An obligate cave or cave-like structure roosting species closely associated with the desert washes.
Neotoma lepida intermedia	San Diego desert woodrat	Chaparral, particularly abundant in areas of rock outcrops	DFG: CSC Other: Special Animal County Group: 2	Moderate Potential	If present, this species would be limited to the southern mixed chaparral on-site. Limited succulent species occur on-site.
Nyctinomops femorosaccus	pocketed free-tailed bat	Cliff rooster, feeds in multiple habitats	DFG: CSC Other: Special Animal County Group: 2	Low Potential	Project site and adjacent riparian corridor could support potential foraging habitat; but potential roosting habitat not observed near the property.
Nyctinomops macrotis	big free-tailed bat	Cliff rooster, prefers rugged, rocky canyons, feeds in multiple habitats including over water	DFG: CSC Other: Special Animal County Group: 2	Low Potential	No steep rocky cliff roosting habitat on site; forages at tree canopy height.
Odocoileus hemionus fuliginata	southern mule deer	Chaparral and open forest habitats with abundant edge and interspersed riparian habitat	County Group: 2	Low Potential	If present, this species would mostly be limited to the southern mixed chaparral on-site, though it may occasionally utilize disturbed habitat.
Taxidea taxus	American badger	Grasslands and open scrub habitats	DFG: CSC Other: Special Animal County Group: 2	Low Potential	Due to the natural vegetation on site consisting of dense southern mixed chaparral and the rest of the site being highly disturbed, it is unlikely that this species occurs on site.

Note: The species addressed in this table are from the list provided in the first iteration review letter, dated January 9, 2007.

[1]**Sensitivity Listings**

Endangered Species Act (ESA) Listing Codes: FE = Federally-listed as Endangered; FT = Federally-listed as Threatened; FPE = Federally proposed for listing as Endangered; FPT = Federally proposed for listing as Threatened; FPD = Federally proposed for delisting; FC = Federal candidate species (former Category 1 candidates); SC = Species of concern (list established by the National Marine Fisheries Service [NMFS] effective April 15, 2004); Delisted species are monitored for 5 years
California Endangered Species Act (CESA) Listing Codes: SE = State-listed as Endangered; ST = State-listed as Threatened; SCE = State candidate for listing as Endangered; SCT = State candidate for listing as Threatened; SCD = State candidate for de-listing; SR = California Rare Species
California Department of Fish and Game (DFG) Listing Codes: CSC = California special concern species; FP = California fully protected species
California Native Plant Society (CNPS) Listing Codes: List of Species Designation: 1A = Plants presumed extinct in California; 1B = Plants rare, threatened, or endangered in California and elsewhere; 2 = Plants rare, threatened, or endangered in California, but more common elsewhere; 3 = Plants about which more information is needed (a review list); 4 = Plants of limited distribution (a watch list)
Other Listing Codes: Special Plants/Animals = A general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status; these taxa fall into one of the above categories and/or one or more of the following categories: 1) Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines; 2) A Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), or U.S. Forest Service (USFS) Sensitive Species; 3) Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring, but not currently threatened with extirpation; 4) Populations in California that may be on the periphery of a taxon's range, but are threatened with extirpation in California; 5) Taxa closely associated with a habitat that is declining in California at an alarming rate (*e.g.*, wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, vernal pools, etc.); and 6) Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or non-governmental organization (NGO) (*e.g.*, The World Conservation Union [IUCN], American Fisheries Society [AFS], Audubon Watch List; California Department of Forestry and Fire Protection [CDF], U.S. Department of Agriculture [USDA] Forest Service [FS], Fish and Wildlife Service Birds of Conservation Concern [FWS BCC], The American Bird Conservancy Green List [ABC Green List], The U.S. Bird Conservation [USBC] Watch List, The Western Bat Working Group [WBWG], and The Xerces Society)
County of San Diego Listing Codes: Plants; List A = Plants rare, threatened or endangered in California and elsewhere; List B = Plants rare, threatened or endangered in California but more common elsewhere; List C = Plants which may be quite rare, but need more information to determine their true rarity status; List D = Plants of limited distribution and are uncommon, but not presently rare or endangered; Animals; Group 1 = Animals rare, threatened or endangered in California and elsewhere; Group 2 = Animals rare, threatened or endangered in California but more common elsewhere
*Sensitivity status applies to nesting/wintering sites only (or burrow sites for the burrowing owl)
References: CDFG 2006 and 2007; County 2006; USFWS 1999

SIGNIFICANCE OF PROJECT IMPACTS AND PROPOSED MITIGATION

SPECIAL STATUS SPECIES

Analysis of Project Impacts

The proposed project would not be expected to result in significant direct or indirect impacts to special status species. Potential impacts to white-tailed kite and red-shouldered hawk, both identified near or flying over the project site, or to those species with a potential to occur on-site, as well as raptor foraging habitat, would not be expected to substantially reduce the habitat or the number, or restrict the range, of the species to a level affecting the species' population stability in the region; and therefore, would not be significant under CEQA or per the County Guidelines for Determining Significance [for] Biological Resources.

RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITIES

Analysis of Project Impacts/Mitigation Measures and Design Considerations

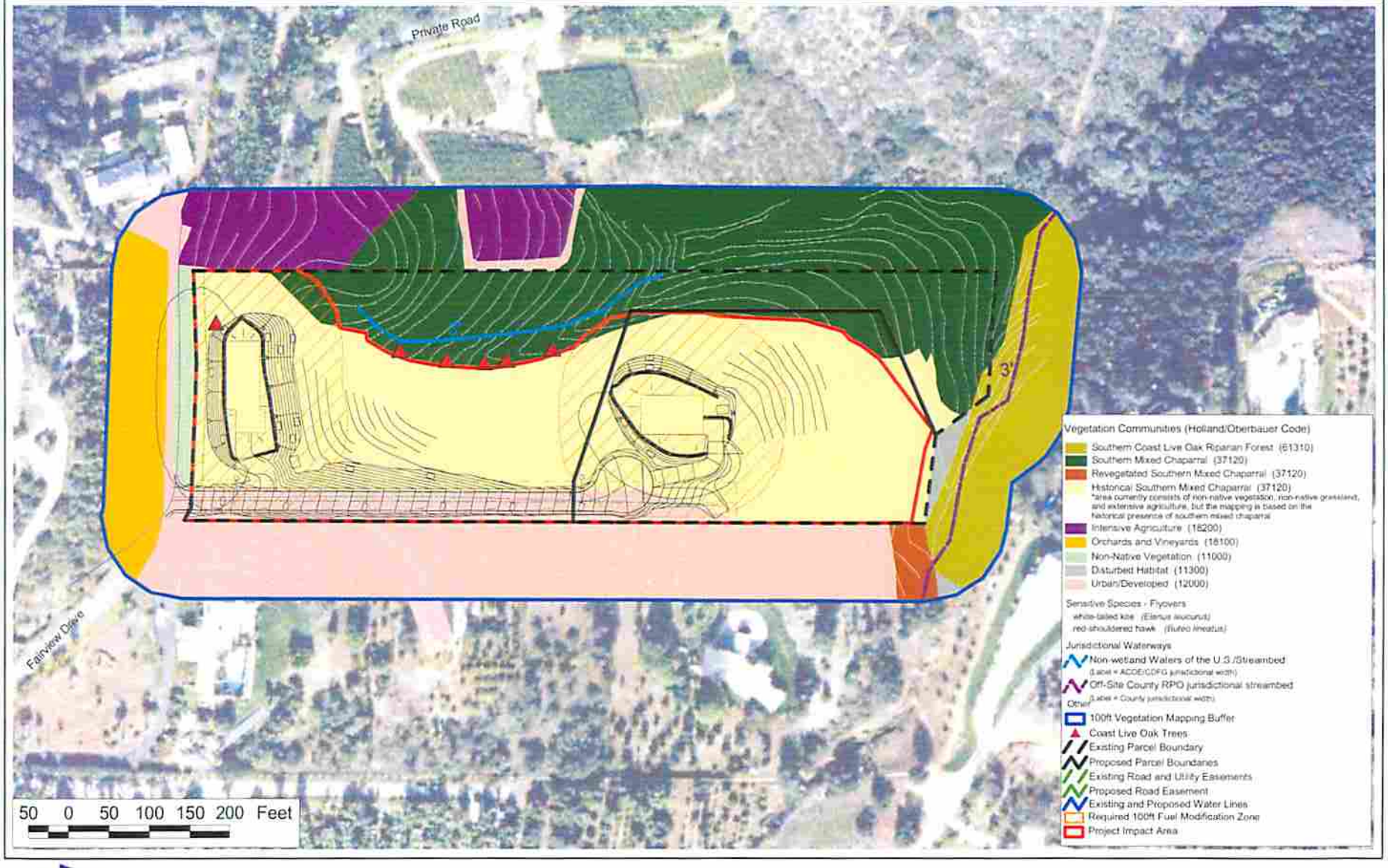
The project has been designed to avoid impacts to wetland habitats and minimize impacts to southern mixed chaparral. The 2 residence pads are proposed to be set back from the boundary of the southern mixed chaparral to minimize direct impacts to this native habitat from fire clearing requirements; thus, the fire clearing would only result in direct impacts to 2 small areas of southern mixed chaparral (Table 5; Figure 4). The development of the proposed single-family residences would result in direct impacts to the areas mapped on-site as historical southern mixed chaparral. Impacts to both the currently existing and historically mapped southern mixed chaparral would be significant under the County Guidelines for Determining Significance [for] Biological Resources, and would require implementation of mitigation measures to reduce impacts to a level below significance.

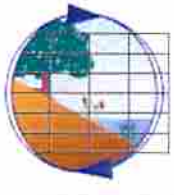
Mitigation for the impacts to southern mixed chaparral is proposed through the dedication of an on-site biological open space easement, which has been designed in accordance with County Project Design Guidelines and includes a minimum 0.5:1 replacement ratio of existing, in-kind southern mixed chaparral habitat (Table 5; Figure 5). The open space is proposed along the northern boundary of the project site where the existing southern mixed chaparral connects to native habitat off-site along Gopher Canyon, towards the northeast. This area of proposed open space also includes the on-site ephemeral tributary (e.g., non-wetland waters of the U.S./streambed) that connects to the off-site, County RPO jurisdictional streambed adjacent to the eastern boundary of the project site. Both of these streambeds convey water runoff to Little Gopher Canyon Creek and ultimately to the San Luis Rey watershed towards the northwest. In addition, the open space is proposed along the eastern boundary of the project site to allow for a 50-foot buffer of the off-site County RPO jurisdictional streambed to protect the functions and values of the ephemeral drainage.

An on-site limited building zone easement is also proposed 100 feet from the boundary of the proposed biological open space easement, which would prohibit the building of any structures that would require vegetation clearing for fuel management purposes (Figure 5). The purpose of the limited building zone easement is to protect the biological open space from impacts incurred by fire clearing requirements. The easement shall include the provision to allow structures that do not require fire fuel modification/vegetation management.

Table 5. Habitat/Vegetation Community Impacts and Mitigation

Vegetation Type	Existing (acres)	Impacts (acres)	Mitigation Ratio	Mitigation Required (acres)	Preserved On-Site (acres)	Impact Neutral (acres)	Off-Site Mitigation (acres)
Southern Coast Live Oak Riparian Forest	0.16	0.00	N/A	N/A	0.16	N/A	N/A
Southern Mixed Chaparral	2.39	0.01	0.5:1	2.08	2.38	N/A	0.00
**Historical Southern Mixed Chaparral*	4.20	4.15			0.05		
Urban/Developed	0.46	0.46	None Required	N/A	N/A	N/A	N/A
Total:	**7.21**	**4.62**		**2.08**	**2.59**	N/A	**0.00**





N
W E
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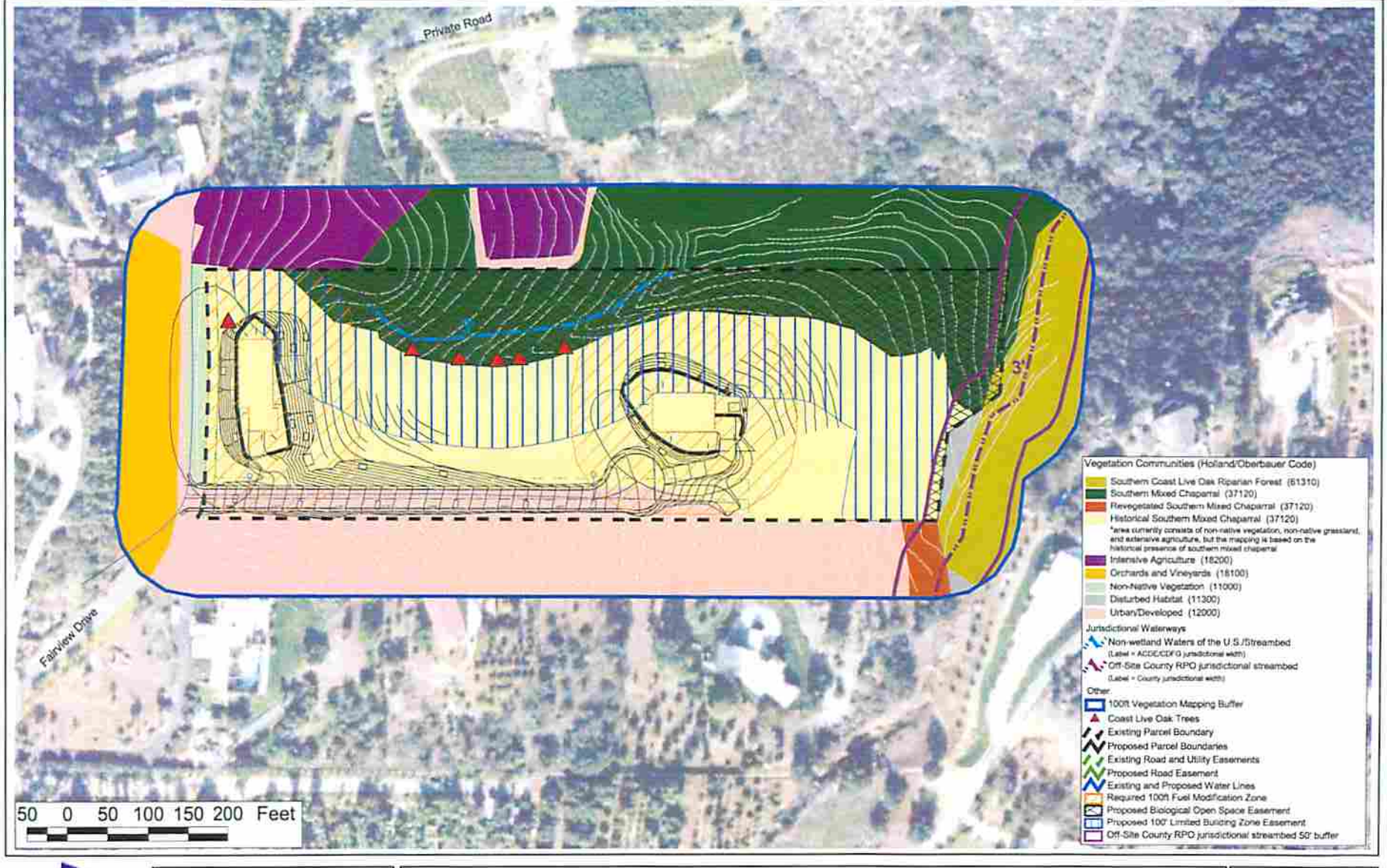
Biological Impacts Map

Kirkorowicz Property

Figure 4

Merkel & Associates, Inc.



N
W E
S

Biological Open Space Map

Kirkorowicz Property

Figure 5

Merkel & Associates, Inc.

The on-site biological open space easement will require the landowner to perform basic stewardship measures to ensure the preservation of the land; however, a Resource Protection Plan (RMP) will not be required (M. Bilodeau 2008, pers. com.) and enhancement activities are not recommended since the proposed open space totals less that 50 acres and does not contain biological resources that would be expected to significantly benefit from active management and/or monitoring. The County may require permanent fencing or walls along the boundary of the biological open space to limit potential encroachment since the open space is proposed within 300 feet of the single-family residences. Temporary fencing shall be required along the boundary of the open space easement during construction activities (if permanent fencing is not already installed) to prevent potential encroachment into the open space during clearing, grading, and construction.

JURISDICTIONAL WETLANDS AND WATERWAYS

Analysis of Project Impacts

The project has been designed to avoid impacts the on-site jurisdictional non-wetland waters of the U.S./streambed. The limits of grading for the 2 residence pads is set back more than 50 feet from the jurisdictional waterway, with proposed landscape swales at the top of each pad to comply with Best Management Practices (BMPs) for source treatment. In addition, the 2 septic tanks and associated leech fields for each residence are proposed where the topography slopes away from the streambed.

WILDLIFE MOVEMENT AND NURSERY SITES

Analysis of Project Impacts

The proposed project would not result in significant impacts to wildlife movement or nursery sites per the County Guidelines for Determining Significance [for] Biological Resources. Since the project site is located at the southwestern tip of a canyon 'finger', it does not facilitate wildlife movement, but effectively "dead-ends" on-site. The project would also not be expected to substantially affect the behavior of species potentially utilizing the off-site, adjacent Gopher Canyon from indirect impacts such as noise and/or nighttime lighting, since the 2 proposed single-family developments are located approximately 1,000 feet to the southwest of the wildlife corridor.

LOCAL POLICIES, ORDINANCES, ADOPTED PLANS

Analysis of Project Impacts

The project would not result in direct impacts to County RPO wetlands; however, the proposed on-site biological open space easement has been designed to include the portion of the southern coast live riparian forest canopy that overhangs the property, and allow for a 50-foot buffer of the off-site, County RPO jurisdictional waterway along the eastern boundary of the property to protect the functions and values of the ephemeral drainage. Restrictions would be included as part of the dedicated easement language, and could include fencing along the open space boundary to prevent encroachment into the sensitive area, signage, and landscaping requirements that prohibit the planting of invasive or exotic species.

CONCLUSIONS

Implementation of the aforementioned project avoidance and mitigation measures would reduce impacts to a level below significance under CEQA and per the County Guidelines for Determining Significance [for] Biological Resources, and ensure compliance with the County RPO.

CUMULATIVE IMPACTS

The project site is located within the northern valley ecoregion of San Diego County, and the surrounding rural development has resulted in encroachment into native southern mixed chaparral habitat. The proposed project would result in additional, cumulative impacts to southern mixed chaparral; however, implementation of the project mitigation measures, consistent with the County RPO and County Guidelines for Determining Significance [for] Biological Resources, would reduce impacts to a level below cumulatively considerable under CEQA.

If you have any questions concerning this biological letter report, please do not hesitate to contact me at (858) 560-5465.

Sincerely,

Rebecca R. Erickson
Senior Biologist/Project Manager

Keith W. Merkel
Principal Consultant/County Approved Biologist

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PREPARER(S) AND PERSONS/ORGANIZATIONS CONTACTED

Merkel & Associates, Inc.

Rebecca R. Erickson, Lead Biologist/Report Author (prior to County first iteration review letter, dated January 9, 2007)

Diana M. Jensen, County Approved Senior Biologist/Contributing Report Author (in response to County first and second iteration review letters, dated January 9, 2007 and October 24, 2007)

Brad R. Kelly, GIS Specialist/Graphics Preparation and Numeric Analyses

APPENDIX 1. FLORA SPECIES OBSERVED

Vegetation Communities/Categories:

O = Southern Coast Live Oak Riparian Forest
C = Southern Mixed Chaparral
N = Non-Native Vegetation
D = Disturbed Habitat
U = Urban/Developed
E = Extensive Agriculture

* = Denotes non-native flora species.

Scientific Name	Common Name	Habitat
DICOTYLEDONS		
Adoxaceae – Adoxa Family		
Sambucus mexicana C. Presl	blue elderberry	C
Aizoaceae - Carpet-weed Family		
**Aptenia cordifolia* (L.f.) N. E. Br.	baby sun rose, dewplant	N
Amaranthaceae - Amaranth Family		
**Amaranthus albus* L.	tumbleweed	D
**Chenopodium murale* L.	nettle-leaf goosefoot	D
**Salsola tragus* L.	Russian thistle	D,N
Anacardiaceae - Sumac Family		
Malosma laurina (Nutt.) Abrams	laurel sumac	C
Rhus ovata S. Watson	sugar bush	C
Toxicodendron diversilobum (Torrey & A. Gray) E. Greene	western poison oak	C,O
Apiaceae - Carrot Family		
**Conium maculatum* L.	common poison hemlock	O
**Foeniculum vulgare* Miller	fennel	D
Apocynaceae - Dogbane Family		
**Nerium oleander* L.	oleander	N
**Vinca major* L.	greater periwinkle	O
Asteraceae - Sunflower Family		
Ambrosia psilostachya DC.	western ragweed	D
Artemisia californica Less.	California sagebrush	C
Baccharis pilularis DC.	coyote brush	C
Baccharis salicifolia (Ruíz Lopez & Pavón) Pers.	mule fat	O
**Carduus pycnocephalus* L.	Italian thistle	D,O
**Centaurea melitensis* L.	tocalote	D
**Chrysanthemum coronarium* L.	garland	D
**Cirsium vulgare* (Savi) Ten.	bull thistle	D
**Conyza bonariensis* (L.) Cronq.	flax-leaf fleabane	D
**Delairea odorata* Lem.	cape-ivy, German ivy	O,C,D
Heterotheca grandiflora Nutt.	telegraph weed	D
**Picris echioides* L.	bristly ox-tongue	D,O
**Silybum marianum* (L.) Gaertner	milk-thistle	O
Bignoniaceae – Trumpet-creeper Family		
**Tecoma capensis* (Thunb.) Lindl.	cape honeysuckle	N
Brassicaceae - Mustard Family		
**Hirschfeldia incana* (L.) Lagr.-Fossat	short-pod mustard	D
**Lobularia maritima* (L.)Desv.	sweet alyssum	D
**Raphanus sativus* L.	radish	D

Scientific Name	Common Name	Habitat
Cactaceae - Cactus Family		
**Opuntia ficus-indica* (L.)Miller	Indian-fig. mission prickly pear	N
Opuntia littoralis (Engelm.) Cockerell	coast prickly-pear	C
Crassulaceae - Stonecrop Family		
**Crassula argentea* Thunb.	jade plant	N
Cucurbitaceae - Gourd Family		
Marah macrocarpus (E. Greene) E. Greene var. *macrocarpus*	wild-cucumber	C
Ericaceae - Heath Family		
Xylococcus bicolor Nutt.	mission manzanita	C
Euphorbiaceae - Spurge Family		
**Chamaesyce maculata* (L.) Small	spotted spurge	D
Croton setigerus Hook.	doveweed	D
**Ricinus communis* L.	castor-bean	D
Fagaceae - Oak Family		
Quercus agrifolia Neé var. *agrifolia*	coast live oak	O,C
Lamiaceae - Mint Family		
Marrubium vulgare L.	horehound	D
Salvia mellifera E. Greene	black sage	C
Lauraceae - Laurel Family		
Persea americana L.	avocado	D
Malvaceae - Mallow Family		
**Malva parviflora* L.	cheeseweed, little mallow	D
Nyctaginaceae - Four-O'Clock Family		
**Bougainvillea* Comm. ex. Juss. sp.	bougainvillea, paper flower	N
Polygonaceae - Buckwheat Family		
Eriogonum fasciculatum Benth. var. *foliolosum* (Nutt.) Abrams	interior flat-top buckwheat, inland California buckwheat	C
Primulaceae - Primrose Family		
**Anagallis arvensis* L.	scarlet pimpernel	D
Rosaceae - Rose Family		
Adenostoma fasciculatum Hook & Arn.	chamise	C
Heteromeles arbutifolia (Lindley) Roemer	toyon	C

Scientific Name	Common Name	Habitat
Rutaceae – Rue Family		
Cneoridium dumosum (Nutt.) Baillon	bushrue	C
Simaroubaceae - Quassia Family		
**Ailanthus altissima* (Miller) Swingle	tree-of-heaven	N
Solanaceae - Nightshade Family		
**Nicotiana glauca* Graham	tree tobacco	D,N
MONOCOTYLEDONS		
Agavaceae - Agave Family		
Yucca schidigera K. E. Ortgies	Mojave yucca	C
Arecaceae - Palm Family		
**Syagrus romanzoffiana* (Chamisso) Glassman	queen palm	N
**Phoenix canariensis* Chaubaud	Canary Island date palm	N
Washingtonia filifera (André) H. Wendl.	California fan palm	N
Cyperaceae – Sedge Family		
**Cyperus papyrus* L.	papyrus	E
Poaceae - Grass Family		
**Avena barbata* Link	slender wild oat	D
**Bromus diandrus* Roth	ripgut grass	D
**Bromus madritensis* L. ssp. *rubens* (L.) Husnot	red brome, foxtail chess	D
Nassella pulchra (A. Hitchc.) Barkworth	purple needlegrass	C
**Piptatherum miliaceum* (L.) Cosson	smilo grass	D,C

APPENDIX 2. JURISDICTIONAL WETLAND DELINEATION DATA FORMS

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 ACOE Wetlands Delineation Manual)

Project/Site:	Kirkorowicz Property	Date:	7 April 2006
Applicant/Owner:	Christopher Kirkorowicz	County:	San Diego
Investigator:	Rebecca R. Atiles and Amanda K. Gonzales	State:	CA
Do normal circumstances exist on the site?	☒ Yes ☐ No	Community ID:	DIST
Is the site significantly disturbed (Atypical Situation)?	☐ Yes ☒ No	Transect ID:	----
Is the area a potential Problem Area?	☐ Yes ☒ No	Plot ID:	DP1, PP1
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Delairea odorata*	H	----	9.		
2. *Raphanus sativus*	H	NI	10.		
3. *Cirsium vulgare*	H	FACU	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percentage of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0 percent

Remarks: Data Point located within disturbed habitat. Hydrophytic vegetation not present. Area surrounding data point is primarily overrun with escaped German ivy. Evidence of recent soil disturbance.

HYDROLOGY

☒ Recorded Data (Described in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:
- Depth of Surface Water: ---- (in.)
- Depth to free Water in Pit ---- (in.)
- Depth of Saturated Soil: ---- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks: Data Point located on bank of recent soil disturbance. No evidence of hydrology.

SOILS

Map Unit Name (Series and Phase): Las Posas fine sandy loam

Drainage Class: Well-drained

Taxonomy (Subgroup): Typic Rhodoxeralfs

Field Observations
Confirm Mapped Type? ☒ Yes ☐ No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle (Abundance/Contrast)	Texture, Concretions, Structure, etc.
0-8	1	7.5 YR 2.5/1	----	----	Loam
8-12	2	10YR 3/4	----	----	Sandy Loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in surface layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: No hydric soils. Low-chroma color in top 8.0 inches likely due to nutrient-rich topsoil or agricultural soil deposited in area.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	☐	No	☒			
Wetland Hydrology Present?	Yes	☐	No	☒			
Hydric Soils Present?	Yes	☐	No	☒	Is this Sampling Point Within a Wetland?	Yes ☐	No ☒

Remarks: Data Point located within disturbed habitat. Not a wetland.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 ACOE Wetlands Delineation Manual)

Project/Site:	Kirkorowicz Property	Date:	7 April 2006
Applicant/Owner:	Christopher Kirkorowicz	County:	San Diego
Investigator:	Rebecca R. Atiles and Amanda K. Gonzales	State:	CA
Do normal circumstances exist on the site?	☒ Yes ☐ No	Community ID:	SMC
Is the site significantly disturbed (Atypical Situation)?	☐ Yes ☒ No	Transect ID:	----
Is the area a potential Problem Area?	☐ Yes ☒ No	Plot ID:	DP2, PP2
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Carduus pycnocephalus*	H	----	9.		
2. *Adenostoma fasciculatum*	S	----	10.		
3. *Bromus diandrus*	H	NI	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percentage of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0 percent

Remarks: Data Point located within southern mixed chaparral. Hydrophytic vegetation not present.

HYDROLOGY

☒ Recorded Data (Described in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:
- Depth of Surface Water: _____ (in.)
- Depth to free Water in Pit _____ (in.)
- Depth of Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks: Data Point located on bank within upland vegetation. No hydrology present.

SOILS

Map Unit Name
(Series and Phase): Las Posas fine sandy loam

Drainage Class: Well-drained

Taxonomy (Subgroup): Typic Rhodoxeralfs

Field Observations
Confirm Mapped Type? ☐ Yes ☒ No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle (Abundance/Contrast)	Texture, Concretions, Structure, etc.
0-5	----	10YR 3/4	----	----	Loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in surface layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: No hydric soils. Unable to dig past 5 inches due to presence of rock/soil compaction in drainage. Roots abundant in first 5 inches.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	☐	No	☒				
Wetland Hydrology Present?	Yes	☐	No	☒				
Hydric Soils Present?	Yes	☐	No	☒	Is this Sampling Point Within a Wetland?	Yes	☐	No ☒

Remarks: Data Point located within southern mixed chaparral.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 ACOE Wetlands Delineation Manual)

Project/Site:	Kirkorowicz Property	Date:	7 April 2006
Applicant/Owner:	Christopher Kirkorowicz	County:	San Diego
Investigator:	Rebecca R. Atiles and Amanda K. Gonzales	State:	CA

Do normal circumstances exist on the site?	☒ Yes	☐ No	Community ID:	NWW/SMC
Is the site significantly disturbed (Atypical Situation)?	☐ Yes	☒ No	Transect ID:	----
Is the area a potential Problem Area?	☐ Yes	☒ No	Plot ID:	DP3, PP3
(If needed, explain on reverse.)				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Carduus pycnocephalus*	H	----	9.		
2. *Quercus agrifolia*	T	NI	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percentage of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0 percent

Remarks: Data Point located within southern mixed chaparral. Hydrophytic vegetation not present.

HYDROLOGY

☒ Recorded Data (Described in Remarks):
- ☐ Stream, Lake, or Tide Gauge
- ☒ Aerial Photographs
- ☐ Other

☐ No Recorded Data Available

Field Observations:
- Depth of Surface Water: ---- (in.)
- Depth to free Water in Pit ---- (in.)
- Depth of Saturated Soil: ---- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Remarks: Data Point located in drainage channel under canopy of southern mixed chaparral.

SOILS

Map Unit Name
(Series and Phase): Las Posas fine sandy loam

Drainage Class: Well-drained

Taxonomy (Subgroup): Typic Rhodoxeralfs

Field Observations
Confirm Mapped Type? ☐ Yes ☒ No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle (Abundance/Contrast)	Texture, Concretions, Structure, etc.
0-6	----	10YR 3/3	----	----	Loam

Hydric Soil Indicators:

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma Colors
- ☐ Concretions
- ☐ High Organic Content in surface layer in Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on Local Hydric Soils List
- ☐ Listed on National Hydric Soils List
- ☐ Other (Explain in Remarks)

Remarks: No hydric soils. Unable to dig past 6 inches due to presence of rock/soil compaction in drainage.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes ☐ No ☒

Wetland Hydrology Present? Yes ☒ No ☐

Hydric Soils Present? Yes ☐ No ☒

Is this Sampling Point Within a Wetland? Yes ☐ No ☒

Remarks: Data Point located within a non-wetland water of the U.S./streambed. ACOE/CDFG 3'. Drainage is not subject to the County RPO jurisdiction.

APPENDIX 3. JURISDICTIONAL WETLAND DELINEATION PHOTO POINTS

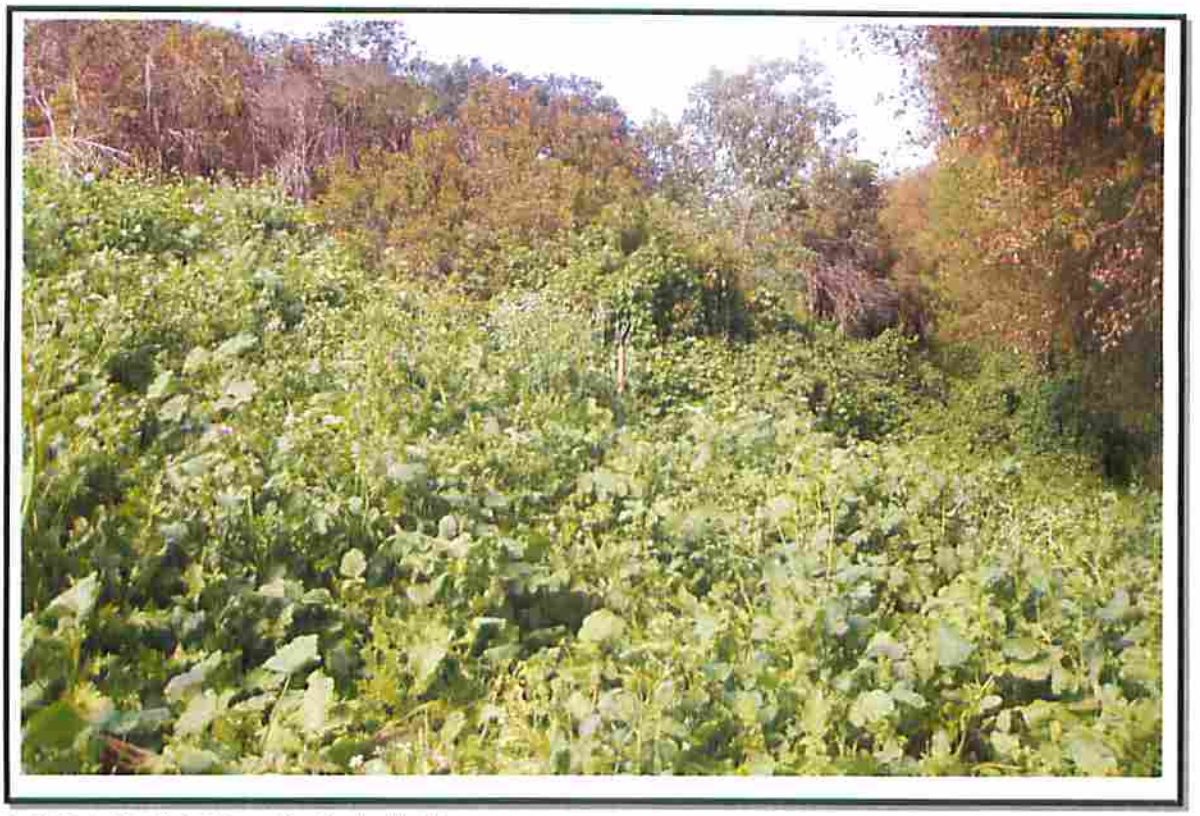

Photo Point 1. Data Point 1 located in disturbed habitat.

Photo Point 2. Data Point 2 located in southern mixed chaparral.

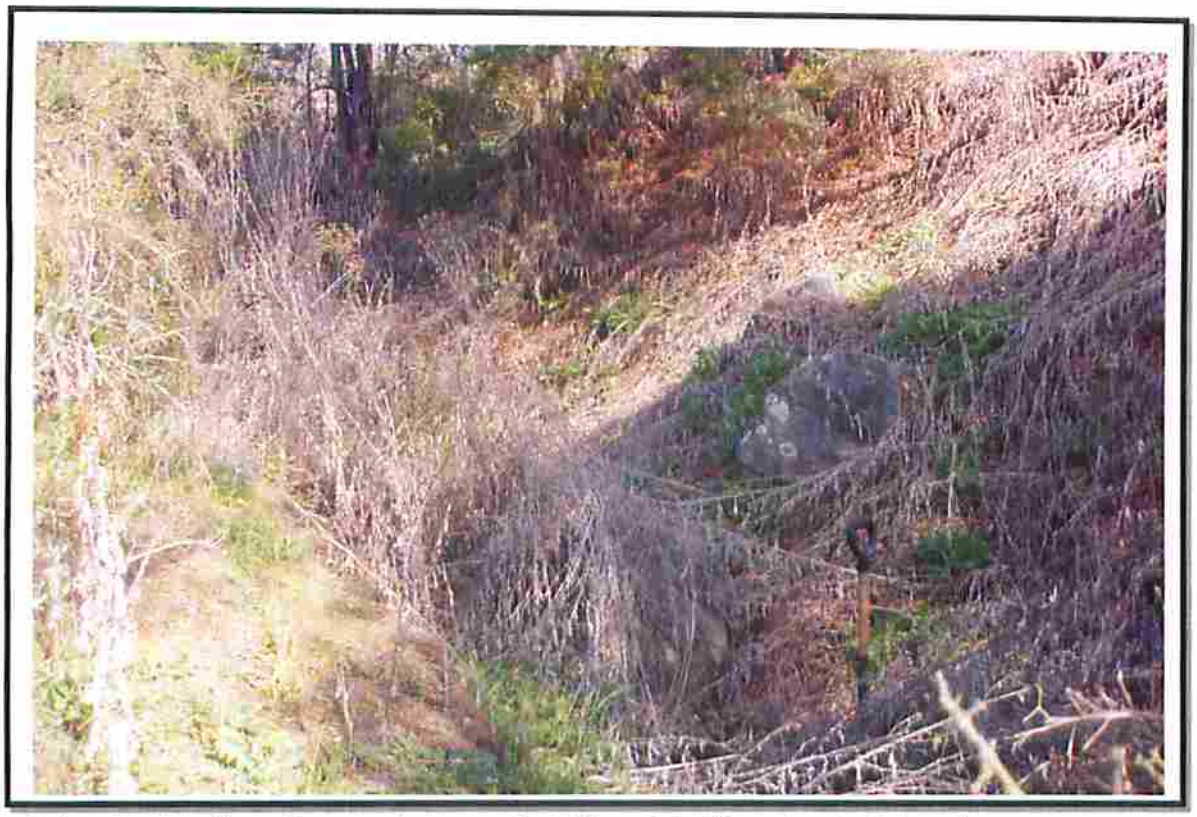

Photo Point 3. Data Point 3 located in a non-wetland water of the U.S./streambed within southern mixed chaparral.

APPENDIX 4. FAUNAL CHECKLIST OF SPECIES OBSERVED OR DETECTED

Habitat Types:

O = Southern Coast Live Oak Riparian Forest
C = Southern Mixed Chaparral
N = Non-Native Vegetation
D = Disturbed Habitat
U = Urban/Developed
E = Extensive Agriculture

F = Denotes fly over species.

Common Name	Scientific Name	Habitat
REPTILES		
Phrynosomatidae		
western fence lizard	*Sceloporus occidentalis*	D
BIRDS		
Phasianidae (Quails, Pheasants, and Relatives)		
California quail	*Callipepla californica*	C
Accipitridae (Hawks, Old World Vultures, and Harriers)		
white-tailed kite	*Elanus leucurus*	F
red-shouldered hawk	*Buteo lineatus*	(off-site)
Columbidae (Pigeons and Doves)		
mourning dove	*Zenaida macroura*	N
Trochilidae (Hummingbirds)		
Anna's hummingbird	*Calypte anna*	F
Tyrannidae (Tyrant Flycatchers)		
black phoebe	*Sayornis nigricans*	N
Corvidae (Jays, Magpies, and Crows)		
western scrub-jay	*Aphelocoma californica*	C
American crow	*Corvus brachyrhynchos*	F,C (off-site)
Mimidae (Mockingbirds and Thrashers)		
northern mockingbird	*Mimus polyglottos*	D
California thrasher	*Toxostoma redivivum*	C
Emberizidae (Sparrows, Blackbirds and Relatives)		
California towhee	*Pipilo crissalis*	C
white-crowned sparrow	*Zonotrichia leucophrys*	C
Fringillidae (Finches)		
house finch	*Carpodacus mexicanus*	N,D
lesser goldfinch	*Carduelis psaltria*	C
MAMMALS		
Sciuridae (Squirrels, Chipmunks, and Marmots)		
California ground squirrel	*Spermophilus beecheyi*	D
Geomyidae (Pocket Gophers)		
Botta's pocket gopher	*Thomomys bottae*	D

Common Name	Scientific Name	Habitat
Muridae (Rats, mice, and voles)		
dusky-footed woodrat	*Neotoma fuscipes*	C